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                 (ROSPATENT) added to list of core patent offices covered
 NEWS 4  FEB 28  PATDPAFULL - New display fields provide for legal status
                 data from INPADOC
 NEWS 5  FEB 28  BABS - Current-awareness alerts (SDIs) available
 NEWS 6  FEB 28  MEDLINE/LMEDLINE reloaded
 NEWS 7  MAR 02  GBFULL: New full-text patent database on STN
 NEWS 8  MAR 03  REGISTRY/ZREGISTRY - Sequence annotations enhanced
 NEWS 9  MAR 03  MEDLINE file segment of TOXCENTER reloaded
 NEWS 10 MAR 22  KOREAPAT now updated monthly; patent information enhanced
 NEWS 11 MAR 22  Original IDE display format returns to REGISTRY/ZREGISTRY
 NEWS 12 MAR 22  PATDPASPC - New patent database available
 NEWS 13 MAR 22  REGISTRY/ZREGISTRY enhanced with experimental property tags
 NEWS 14 APR 04  EPFULL enhanced with additional patent information and new
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 NEWS 15 APR 04  EMBASE - Database reloaded and enhanced
 NEWS 16 APR 18  New CAS Information Use Policies available online
 NEWS 17 APR 25  Patent searching, including current-awareness alerts (SDIs),
                 based on application date in CA/CAplus and USPATFULL/USPAT2
                 may be affected by a change in filing date for U.S.
                 applications.
 NEWS 18 APR 28  Improved searching of U.S. Patent Classifications for
                 U.S. patent records in CA/CAplus
 NEWS 19 MAY 23  GBFULL enhanced with patent drawing images
 NEWS 20 MAY 23  REGISTRY has been enhanced with source information from
                 CHEMCATS

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               DISCOVER FILE IS DATED 10 JANUARY 2005

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=> s (tryptophan(w)hydroxylase(w)isoform)/bi,ab     69687
TRYPTOPHAN/BI                54633 TRYPTOPHAN/AB
39674 HYDROXYLASE/BI                 34573 HYDROXYLASE/AB
43265 ISOFORM/BI                28280 ISOFORM/AB
L1          15
(TRYPTOPHAN(W)HYDROXYLASE(W)ISOFORM)/BI,AB

=> s tph2/bi,ab       23 TPH2/BI                    23 TPH2/AB
L2          23 TPH2/BI,AB

=> s l1 or l2
L3          28 L1 OR L2

=> d his
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L1           15 S
(TRYPTOPHAN(W)HYDROXYLASE(W)ISOFORM)/BI,AB
L2           23 S TPH2/BI,AB
L3           28 S L1 OR L2

=> d l3 1-28 bib ab

L3   ANSWER 1 OF 28  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2005:405351  CAPLUS
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TI Method for identifying compounds that affect expression of ***tryptophan*** ***hydroxylase*** ***isoform*** 2
IN Clark, Janet
PA Merck & Co., Inc., USA
SO PCT Int. Appl., 59 pp. CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- -------
PI WO 2005041750 A2 20050512 WO 2004-US34619 20041020 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI US 2003-514268P P 20031024
AB A method for identifying analytes which directly or indirectly affect ***tryptophan*** ***hydroxylase*** ***isoform*** 2 (***TPH2***) expression is described. The method enables glucocorticoid receptor modulators and &bgr;-hydroxysteroid dehydrogenase type 1 (&bgr;-HSD1) inhibitors to be screened for central nervous system penetrance and activity by determining their ability to regulate expression of ***TPH2*** . The method is particularly useful for identifying analytes which suppress glucocorticoid disruption of central serotonergic neurotransmission in the brain.

L3 ANSWER 2 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:364511 CAPLUS
TI A second ***tryptophan*** ***hydroxylase*** ***isoform*** , TPH-2 mRNA, is increased by ovarian steroids in the raphe region of macaques
AU Sanchez, Rachel L.; Reddy, Arubala P.; Centeno, Maria L.; Henderson, Jessica A.; Bethea, Cynthia L.
CS Division of Reproductive Sciences, Oregon National Primate Research Center, Beaverton, OR, 97006, USA
SO Molecular Brain Research (2005), 135(1-2), 194-203 CODEN: MBREE4; ISSN: 0169-328X
PB Elsevier B.V.
DT Journal
LA English
AB Recently, a second gene that codes for the rate-limiting enzyme in serotonin synthesis was found in brain, named tryptophan hydroxylase-2 (TPH-2). We sequenced overlapping segments (251 and 510 bp) of 5' monkey TPH-2 and questioned whether TPH-2 is regulated by estrogen (E) and progesterone (P) in serotonin neurons of macaques. Monkey TPH-2 was 97% homologous to human TPH-2 and 65% homologous to monkey TPH-1 in the coding region. Spayed monkeys were administered placebo, E-only, P-only, or E + P for 1 mo via Silastic implants (n = 4/treatment) and the midbrain was utilized for TPH-2 in situ hybridization (ISH). Addnl. monkeys (n = 3/treatment) were used to det. the relative abundance of TPH-2 mRNA with quant. (q) RT-PCR. In the ISH assay, all of the hormone treatments caused a significant and similar increase in TPH-2 mRNA optical d. (fourfold; $P < 0.004$) and pos. pixel area (twofold; $P < 0.002$) over spayed controls. Treatment with E or E + P for 1 mo increased the relative abundance of TPH-2 mRNA over spayed controls in the qRT-PCR assay (ANOVA $P < 0.05$ and $P < 0.007$, resp.). In conclusion, ovarian steroids stimulate TPH-2 mRNA expression, which could in turn cause an increase in serotonin synthesis. This would impact many of the neural functions that are governed by serotonin.

L3 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:345675 CAPLUS
TI Promoter polymorphism of second ***tryptophan*** ***hydroxylase*** ***isoform*** (***TPH2***) in schizophrenia and suicidality
AU De Luca, Vincenzo; Voineskos, Daphne; Wong, Gregory W. H.; Shinkai, Takahiro; Rothe, Claudia; Strauss, John; Kennedy, James L.
CS Neurogenetics Section, Clarke Site, Centre for Addiction and Mental Health, Department of Psychiatry, 250 College Street, University of Toronto, R-30, Toronto, ON, M5T 1R8, Can.
SO Psychiatry Research (2005), 134(2), 195-198 CODEN: PSRSDR; ISSN: 0165-1781
PB Elsevier Ltd.
DT Journal
LA English
AB Allele and haplotype frequencies of a promoter polymorphism in the gene encoding tryptophan hydroxylase (***TPH2***) did not differ in 83 suicidal schizophrenic patients compared with 170 non-suicidal schizophrenic patients. These findings suggest that these 5' marker haplotypes in the ***TPH2*** gene do not influence suicidal behavior in schizophrenia.

L3 ANSWER 4 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:309053 CAPLUS
TI Differential hormonal regulation of tryptophan hydroxylase-2 mRNA in the murine dorsal raphe nucleus
AU Clark, Janet A.; Pai, Lee-Yuh; Flick, Rosemarie Beth; Rohrer, Susan P.
CS Department of Molecular Endocrinology, Merck Research Laboratories, Merck & Company Inc., Rahway, NJ, USA
SO Biological Psychiatry (2005), 57(8), 943-946 CODEN: BIPCBF; ISSN: 0006-3223
PB Elsevier Inc.
DT Journal
LA English
AB Background: Recently a novel ***tryptophan*** ***hydroxylase*** ***isoform*** (***TPH2***) was identified and shown to be highly expressed in the central nervous system (CNS). Hormonal effects on ***TPH2*** mRNA expression in the rodent dorsal raphe nucleus (DRN) are unknown. Methods: In situ hybridization histochem. and real-time reverse transcriptase-polymerase chain reaction (RT-PCR) were used to assess the effects of dexamethasone or estradiol on ***TPH2*** mRNA levels in the DRN of C57/Bl6 mice. Results: Dexamethasone reduced ***TPH2*** mRNA levels in the DRN of both ovx female and intact male mice. Redn. of ***TPH2*** mRNA in the DRN was blocked by co-administration of mifepristone. Estradiol had no detectable effect on ***TPH2*** mRNA levels in the DRN. Conclusions: ***TPH2*** mRNA is regulated by glucocorticoids but not estradiol in the mouse DRN. Glucocorticoid- mediated redn. of ***TPH2*** message may have relevance to the etiol. of major depression, psychotic major depression in particular, where elevated glucocorticoids are one hallmark of the disease.

L3 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:307631 CAPLUS
TI Monoamine oxidase A and tryptophan hydroxylase gene polymorphisms: are they associated with bipolar disorder?
AU Preisig, Martin; Ferrero, Francois; Malafosse, Alain

CS University Department of Adult Psychiatry, Lausanne, Switz.
SO American Journal of PharmacoGenomics (2005), 5(1), 45-52 CODEN: AJPMC8; ISSN: 1175-2203
PB Adis International Ltd.
DT Journal
LA English
AB Most of the candidate gene studies in bipolar disorder have focused on the major neurotransmitter systems that are influenced by drugs used in the treatment of this disorder. The monoamine oxidase A (MAOA) and the tryptophan hydroxylase (TPH1, ***TPH2***) genes are two of the candidates that have been tested in a series of assocn. studies using unrelated or family-based controls. This review summarizes the existing assocn. studies regarding these genes. Most of these studies were based on the unrelated case-control design with samples of 50 to 600 subjects. Regarding MAOA, three meta-analyses with partially overlapping samples supported a modest effect of this gene in bipolar disorder in female Caucasians. However, as several studies could not replicate these findings, more work is necessary to demonstrate unequivocally the involvement of MAOA in bipolar disorder and establish the biol. mechanism underlying the genetic assocn. With respect to TPH1 and ***TPH2*** , the majority of studies did not provide evidence for an assocn. between these genes and bipolar disorder. The genes are more likely to be related to suicidal behavior than to bipolar disorder.
RE.CNT 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:91263 CAPLUS
DN 142:311855
TI Different properties of the central and peripheral forms of human tryptophan hydroxylase
AU McKinney, Jeffrey; Knappskog, Per M.; Haavik, Jan
CS Department of Biomedicine, Section of Biochemistry and Molecular Biology, University of Bergen, Bergen, Norway
SO Journal of Neurochemistry (2005), 92(2), 311-320 CODEN: JONRA9; ISSN: 0022-3042
PB Blackwell Publishing Ltd.
DT Journal
LA English
AB Tryptophan hydroxylase (TPH) catalyzes the rate-limiting reaction in the biosynthesis of serotonin. In humans, two different TPH genes exist, located on chromosomes 11 and 12, resp., and encoding two enzymes (TPH1 and ***TPH2***) with an overall sequence identity of 71%. The authors have expressed both enzymes as various fusion proteins in Escherichia coli and using an in vitro transcription/translation system, and compared their soly. and kinetic properties. ***TPH2*** is more sol. than TPH1, has a higher mol. wt. and different kinetic properties, including a lower catalytic efficiency towards phenylalanine than TPH1. Both enzymes are phosphorylated by cAMP-dependent protein kinase A. ***TPH2*** was phosphorylated at Ser-19, a phosphorylation site not present in TPH1. The differences between TPH1 and ***TPH2*** have important implications for the regulation of serotonin prodn. in the brain and the periphery and may provide an explanation for some of the diverging results reported for TPH from different sources in the past.
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:885157 CAPLUS
DN 142:111677
TI Support for the involvement of ***TPH2*** gene in affective disorders
AU Harvey, M.; Shink, E.; Tremblay, M.; Gagne, B.; Raymond, C.; Labbe, M.; Walther, D. J.; Bader, M.; Barden, N.
CS Neuroscience, CHUL Research Center, Ste-Foy, QC, Can.
SO Molecular Psychiatry (2004), 9(11), 980-981 CODEN: MOPSFQ; ISSN: 1359-4184
PB Nature Publishing Group
DT Journal
LA English
AB The tryptophan hydroxylase 2 (***TPH2***) gene was examd. as a putative candidate gene using a SNP-based assocn. study involving 213 individuals with bipolar disorder and 214 control subjects. Five out of the eight estd. haplotypes represent 90 and 93% of haplotypes found in case and control groups, resp. The data obtained provide support to previous results that suggest the existence of an affective disorder-assocd. haplotype in the ***TPH2*** gene.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:885151 CAPLUS
DN 142:36363
TI SNP and haplotype analysis of a novel ***tryptophan*** ***hydroxylase*** ***isoform*** (***TPH2***) gene provide evidence for association with major depression
AU Zill, P.; Baghai, T. C.; Zwanzger, P.; Schuele, C.; Eser, D.; Rupprecht, R.; Moeller, H-J.; Bondy, B.; Ackenheil, M.
CS Psychiatric Hospital, Ludwig-Maximilians-University, Munich, Munich, D-80336, Germany
SO Molecular Psychiatry (2004), 9(11), 1030-1036 CODEN: MOPSFQ; ISSN: 1359-4184
PB Nature Publishing Group
DT Journal
LA English
AB Tryptophan hydroxylase (TPH), being the rate-limiting enzyme in the biosynthesis of serotonin plays a major role as candidate gene in several psychiatric disorders. Recently, a second TPH isoform (***TPH2***) was identified in mice, which was exclusively present in the brain. In a previous post-mortem study of our own group, we could demonstrate that ***TPH2*** is also expressed in the human brain, but not in peripheral tissues. This is the first report of an assocn. study between polymorphisms in the ***TPH2*** gene and major depression (MD). We performed single-nucleotide polymorphism (SNP), haplotype and linkage disequil. studies on 300 depressed patients and 265 healthy controls with 10 SNPs in the ***TPH2*** gene. Significant assocn. was detected between one SNP (P=0.0012, global P=0.0051) and MD. Haplotype anal. produced addnl. support for assocn. (P<0.0001, global P=0.0001). Our findings provide evidence for an involvement of genetic variants of the ***TPH2*** gene in the pathogenesis of MD and might be a hint on the repeatedly discussed duality of the serotonergic system. These results may open up new research strategies for the anal. of the obsd. disturbances in the serotonergic system in patients suffering from several other psychiatric disorders.
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:832118 CAPLUS
DN 142:4738

TI Single nucleotide polymorphism and haplotype analysis of a novel ***tryptophan*** ***hydroxylase*** ***isoform*** (***TPH2***) gene in suicide victims
AU Zill, Peter; Buettner, Andreas; Eisenmenger, Wolfgang; Moeller, Hans-Juergen; Bondy, Brigitta; Ackenheil, Manfred
CS Psychiatric Hospital, Ludwig-Maximilians-University, Munich, Germany
SO Biological Psychiatry (2004), 56(8), 581-586 CODEN: BIPCBF; ISSN: 0006-3223
PB Elsevier Inc.
DT Journal
LA English
AB Trp hydroxylase, the rate-limiting enzyme in the biosynthesis of serotonin, represents a major candidate in numerous genetic assocn. analyses of suicidal behavior; however, the results are so far inconclusive. Recently, a second Trp hydroxylase isoform (***TPH2***) was identified in mice, which was exclusively present in the brain. In a previous postmortem study of our own group, the authors could demonstrate that ***TPH2*** is also expressed in the human brain but not in peripheral tissues. We performed single nucleotide polymorphisms, haplotypes, and linkage disequil. studies on 263 suicide victims and 266 healthy control subjects with 10 single nucleotide polymorphisms in the ***TPH2*** gene. Significant assocn. was detected between one single nucleotide polymorphism (p = .004, global p = .01) and suicide. Addnl., haplotype anal. also produced support for assocn. (p < .0001, global p = .0001). This is the first report about an assocn. between ***TPH2*** gene polymorphisms and completed suicide. These findings provide evidence for an involvement of genetic variants in the ***TPH2*** gene in suicidal behavior. These results might open up new research strategies for the anal. of the obsd. disturbances in the serotonergic system in several other psychiatric disorders.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:786525 CAPLUS
DN 142:91296
TI Analysis of the novel ***TPH2*** gene in bipolar disorder and suicidality
AU De Luca, V.; Mueller, D. J.; Tharmalingam, S.; King, N.; Kennedy, J. L.
CS Neurogenetics Section, Clarke Site, Centre for Addiction and Mental Health, Department of Psychiatry, University of Toronto, Toronto, ON, Can.
SO Molecular Psychiatry (2004), 9(10), 896-897 CODEN: MOPSFQ; ISSN: 1359-4184
PB Nature Publishing Group
DT Journal
LA English
AB The putative role of the tryptophan hydroxylase 2 (***TPH2***) gene in suicide attempters was studied using a large and well-characterized sample of patients with bipolar disorder. The study population consisted of 336 bipolar patients from 305 families who were recruited in the Toronto area. Among the bipolar patients, 267 patients had history of suicide ideas or attempt. The genotypes of ***TPH2*** hCV245410, hCV8376173, and rs1487280 polymorphisms were detd. by Taqman assay. Allelic and haplotype transmission tests in suicide attempters were performed using TDT and TRANSMIT. When the suicide behavior was analyzed as a quant. trait by the family based assocn. test, no significant differences were found for the three polymorphisms. All the eight possible haplotypes showed no significant results when weighted on the suicide behavior as the quant. trait. In bipolar patients, the TDT did not show significant bias for hCV245410, hCV8376173, and rs1487280.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:699213 CAPLUS
DN 142:107190
TI Investigation of serotonin-related genes in antidepressant response
AU Peters, E. J.; Slager, S. L.; McGrath, P. J.; Knowles, J. A.; Hamilton, S. P.
CS Department of Psychiatry, University of California, San Francisco, CA, USA
SO Molecular Psychiatry (2004), 9(9), 879-889 CODEN: MOPSFQ; ISSN: 1359-4184
PB Nature Publishing Group
DT Journal
LA English
AB In this study, we sought out to test the hypothesis that genetic factors may influence antidepressant response to fluoxetine. The investigation focused on seven candidate genes in the serotonergic pathway involved in the synthesis, transport, recognition, and degrdn. of serotonin. Our clin. sample consisted of 96 subjects with unipolar major depression treated with fluoxetine with response variables assessed after a 12-wk trial. Patient data were also collected to investigate the pattern of drug response. Using a high-throughput single-nucleotide polymorphism (SNP) genotyping platform and capillary electrophoresis, we genotyped patients at 110 SNPs and four repeat polymorphisms located in seven candidate genes (HTR1A, HTR2A, HTR2C, MAOA, SLC6A4, TPH1, and ***TPH2***). Statistical tests performed included single-locus and haplotype assocn. tests, and linkage disequil. (LD) estn. Little evidence of population stratification was obsd. in the sample with 20 random SNPs using a genomic control procedure. Our most intriguing result involved three SNPs in the TPH1 gene and one SNP in the SLC6A4 gene, which show significant single-locus assocn. when response to fluoxetine is compared to nonresponse (P=0.02-0.04). All odds ratios indicated an increased risk of not responding to fluoxetine. In the specific response vs nonspecific and nonresponse comparison, three SNPs in the ***TPH2*** gene (P=0.02-0.04) were pos. assocd. and one SNP in the HTR2A gene (P=0.02) was neg. assocd. When comparing specific response to nonspecific response, we found significant neg. assocns. in three SNPs in the HTR2A gene (P=0.001-0.03) and two SNPs in the MAOA gene (P=0.03-0.05). We obsd. variable, although strong LD, in each gene and unexpectedly low nos. of estd. haplotypes, formed from tagged SNPs. Significant haplotype assocns. were found in all but the HTR1A and HTR2C genes. Although these data should be interpreted cautiously due to the small sample size, these results implicate TPH1 and SLC6A4 in general response, and HTR2A, ***TPH2*** , and MAOA in the specificity of response to fluoxetine. Intriguingly, we observe that a no. of the less frequent alleles of many of the SNP markers were assocd. with the nonresponse and nonspecific phenotypes.
RE.CNT 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:568127 CAPLUS
DN 141:185419
TI Brevia: Tryptophan hydroxylase-2 controls brain serotonin synthesis

AU Zhang, Xiaodong; Beaulieu, Jean-Martin; Sotnikova, Tatyana D.; Gainetdinov, Raul R.; Caron, Marc G.
CS Howard Hughes Med. Inst.Lab., Dep. Cell Biology and Center Models of Human Disease, Inst. Genome Sciences and Policy, Univ. Med. Center, Durham, NC, 27710, USA
SO Science (Washington, DC, United States) (2004), 305(5681), 217 CODEN: SCIEAS; ISSN: 0036-8075
PB American Association for the Advancement of Science
DT Journal
LA English
AB A minireview discussing the function of tryptophan hydroxylase-2 on controlling synthesis of brain serotonin.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:487176 CAPLUS
DN 141:289728
TI Transmission disequilibrium studies in children and adolescents with obsessive-compulsive disorders pertaining to polymorphisms of genes of the serotonergic pathway
AU Walitza, S.; Wewetzer, C.; Gerlach, M.; Klampfl, K.; Geller, F.; Barth, N.; Hahn, F.; Herpertz-Dahlmann, B.; Goessler, M.; Fleischhaker, C.; Schulz, E.; Hebebrand, J.; Warnke, A.; Hinney, A.
CS Department of Child and Adolescent Psychiatry, Julius-Maximilians- University, Wuerzburg, Germany
SO Journal of Neural Transmission (2004), 111(7), 817-825 CODEN: JNTRF3; ISSN: 0300-9564
PB Springer-Verlag Wien
DT Journal
LA English
AB Pharmacol. and challenge study data showed an involvement of the serotonergic system in the development of obsessive-compulsive disorder (OCD). We studied transmission disequil. of polymorphisms in three candidate genes of the serotonergic pathway in 64 trios comprising patients with early onset OCD and both of their parents. Polymorphisms of the following genes were studied; tryptophan hydroxylase 1 (rs1800532), serotonin transporter (polymorphism in the promoter region; 5-HTTLPR) and the serotonin 1 B receptor (rs6296). This is, to our knowledge, one of the first family based assocn. studies pertaining to children and adolescents with OCD. We did not detect transmission disequil. of the investigated polymorphisms in OCD. Hence, these polymorphisms do not play a major role in the genetic predisposition to early onset OCD.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:479424 CAPLUS
DN 141:120812
TI Diurnal rhythms of tryptophan hydroxylase 1 and 2 mRNA expression in the rat retina
AU Liang, Jian; Wessel, James H., III; Iuvone, P. Michael; Tosini, Gianluca; Fukuhara, Chiaki
CS Neuroscience Institute and NSF Center for Behavioral Neuroscience, Morehouse School of Medicine, Atlanta, GA, 30310-1495, USA
SO NeuroReport (2004), 15(9), 1497-1500 CODEN: NERPEZ; ISSN: 0959-4965
PB Lippincott Williams & Wilkins
DT Journal
LA English
AB Tryptophan hydroxylase is the first of four enzymes in the melatonin biosynthetic pathway. Recent studies have shown that there are two genes, Tph1 and ***Tph2*** , that encode tryptophan hydroxylase in mammals. In this study, we investigated which of the two genes is expressed in the rat retina. To that end, we measured Tph1 (classical Tph) and ***Tph2*** mRNA levels using real-time quant. RT-PCR in the retina. Our data demonstrate that Tph1 mRNA is the prevalent form expressed in the retina; ***Tph2*** mRNA is also present but the level is very low. We also measured Tph1 expression levels in the outer nuclear layer, inner nuclear layer, and ganglion cell layer by combining laser capture microdissection and real-time RT-PCR. Tph1 mRNA is more abundant in the photoreceptors of the outer nuclear layer than in the inner nuclear layer or ganglion cell layer. Tph1 and ***Tph2*** transcripts showed robust diurnal rhythms of abundance, with highest levels at night. Our results support the hypothesis that Tph1 is involved in melatonin synthesis in retinal photoreceptor cells.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:460775 CAPLUS
DN 141:104429
TI Abnormal cardiac activity in mice in the absence of peripheral serotonin synthesis
AU Cote, Francine; Fligny, Cecile; Mallet, Jacques; Vodjdani, Guilan
CS Laboratoire de Genetique Moleculaire de la Neurotransmission et des Processus Neurodegeneratifs, CNRS UMR7091, Hopital de la Pitie-Salpetriere, Paris, F-75013, Fr.
SO Journal de la Societe de Biologie (2004), 198(1), 7-17 CODEN: JDSBFG; ISSN: 1295-0661
PB Masson Editeur
DT Journal
LA French
AB Serotonin (5-HT) controls a wide range of biol. functions. In the brain, its implication as a neurotransmitter and in the control of behavioral traits has been largely documented. At the periphery, its modulatory role in physiol. processes, such as the cardiovascular function, is still poorly understood. The rate limiting enzyme of 5-HT synthesis, tryptophan hydroxylase (TPH), is encoded by two genes: the well characterized TPH1 gene and a recently identified ***TPH2*** gene. Based on the study of a mutant mouse in which the TPH1 gene has been inactivated by replacement of the .beta.-galactosidase gene, we established that the neuronal ***TPH2*** is expressed in neurons of the raphe nuclei and of the myenteric plexus, whereas the non-neuronal TPH1, as detected by .beta.-galactosidase expression, is expressed in the pineal gland and the enterochromaffin cells. Anat. examn. of the mutant mice revealed larger heart sizes as compared to wild-type. Histol. investigations indicated that the primary structure of the heart muscle is not affected. Hemodynamic analyses in mutant animals demonstrated abnormal cardiac activity which ultimately leads to heart failure. This is the first report linking loss of TPH1 gene expression, and thus of peripheral 5-HT, to a cardiac dysfunction phenotype. The TPH1-/- mutant may be a valuable model for investigating cardiovascular dysfunction such as those obsd. in human heart failure.
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:419767 CAPLUS
DN 141:121683
TI Regional mRNA expression of a second ***tryptophan*** ***hydroxylase*** ***isoform*** in postmortem tissue samples of two human brains
AU Zill, Peter; Buttner, Andreas; Eisenmenger, Wolfgang; Bondy, Brigitta; Ackenheil, Manfred
CS Department of Psychiatry, Ludwig-Maximilians-University Munich, Munich, D-80336, Germany
SO European Neuropsychopharmacology (2004), 14(4), 282-284 CODEN: EURNE8; ISSN: 0924-977X
PB Elsevier Science B.V.
DT Journal
LA English
AB Tryptophan hydroxylase (TPH) as rate limiting enzyme in the biosynthesis of serotonin plays a major role as candidate gene in several psychiatric disorders. Recently a second TPH isoform (***TPH2***) was identified in mice, which was exclusively expressed in the brain. We investigated whether the mRNA of the human homolog of this new ***TPH2*** isoform is expressed in the human brain but not in peripheral tissues. The study was performed with postmortem specimen obtained from two subjects who died on cardiovascular failure. ***TPH2*** mRNA levels were detd. by quant. real time RT-PCR. ***TPH2*** mRNA was exclusively present in the human brains but not in the investigated peripheral tissues. Our finding may open up new research strategies for the anal. of the repeatedly obsd. disturbances in the serotonergic system in patients suffering from several psychiatric disorders.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 17 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:160595 CAPLUS
DN 140:315537
TI Serotonin regulates mammary gland development via an autocrine-paracrine loop
AU Matsuda, Manabu; Imaoka, Tatsuhiko; Vomachka, Archie J.; Gudelsky, Gary A.; Hou, Zhaoyuan; Mistry, Meenakshi; Bailey, Jason P.; Nieport, Kathryn M.; Walther, Diego J.; Bader, Michael; Horseman, Nelson D.
CS Department of Molecular and Cellular Physiology, University of Cincinnati, Cincinnati, OH, 45221, USA
SO Developmental Cell (2004), 6(2), 193-203 CODEN: DCEEBE; ISSN: 1534-5807
PB Cell Press
DT Journal
LA English
AB Mammary gland development is controlled by a dynamic interplay between endocrine hormones and locally produced factors. Biogenic monoamines (serotonin, dopamine, norepinephrine, and others) are an important class of bioregulatory mols. that have not been shown to participate in mammary development. Mammary glands stimulated by prolactin (PRL) express genes essential for serotonin biosynthesis (tryptophan hydroxylase [TPH] and arom. amine decarboxylase). TPH mRNA was elevated during pregnancy and lactation, and serotonin was detected in the mammary epithelium and in milk. TPH was induced by PRL in mammosphere cultures and by milk stasis in nursing dams, suggesting that the gene is controlled by milk filling in the alveoli. Serotonin suppressed .beta.-casein gene expression and caused shrinkage of mammary alveoli. Conversely, TPH1 gene disruption or antiserotonergic drugs resulted in enhanced secretory features and alveolar dilation. Thus, autocrine-paracrine serotonin signaling is an important regulator of mammary homeostasis and early involution.
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:111240 CAPLUS
DN 140:336184
TI Robust and tissue-specific expression of ***TPH2*** versus TPH1 in rat raphe and pineal gland
AU Patel, Paresh D.; Pontrello, Crystal; Burke, Sharon
CS University of Michigan Medical Center, Ann Arbor, MI, USA
SO Biological Psychiatry (2004), 55(4), 428-433 CODEN: BIPCBF; ISSN: 0006-3223
PB Elsevier Inc.
DT Journal
LA English
AB Background: Regulation of raphe serotonergic cells is fundamental to the prevailing hypothesis of major depression pathophysiol. Tryptophan hydroxylase (TPH) is the rate-limiting enzyme in serotonin biosynthesis, but brainstem TPH mRNA expression has been difficult to measure and study. Recently, a novel paralog of TPH, ***TPH2*** (or neuronal TPH), was described, but its anat. expression is unknown. Methods: An in situ hybridization histochem. survey was conducted across Sprague-Dawley rat brain for TPH1 and ***TPH2*** mRNA. Semiquant. techniques were used to est. relative mRNA levels in individual cells. Results: Almost exclusively, ***TPH2*** mRNA is expressed in raphe, in a pattern overlapping the histol. defined raphe nuclei. In sharp contrast, TPH1 (the previously known TPH) is expressed predominantly in pineal gland. There is no appreciable overlap in the expression of these paralogs. The level of ***TPH2*** mRNA expression in individual raphe cells is approx. 2.5-fold greater than the level of TPH1 expression in pinealocytes. Conclusions: ***TPH2*** mRNA has an anat. expression pattern consistent with brainstem raphe nuclei and is likely to be the gene giving rise to the majority of TPH activity in these cells. The robust expression of ***TPH2*** in brainstem should facilitate studies on the transcriptional regulation of raphe serotonin biosynthesis.
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:917153 CAPLUS
DN 140:53832
TI Disruption of the nonneuronal tph1 gene demonstrates the importance of peripheral serotonin in cardiac function
AU Cote, Francine; Thevenot, Etienne; Fligny, Cecile; Fromes, Yves; Darmon, Michele; Ripoche, Marie-anne; Bayard, Elisa; Hanoun, Naima; Saurini, Francoise; Lechat, Philippe; Dandolo, Luisa; Hamon, Michel; Mallet, Jacques; Vodjdani, Guilan
CS Laboratoire de Genetique Moleculaire de la Neurotransmission, Centre National de la Recherche Scientifique, Unite Mixte de Recherche 7091 et Institut Federatif de Recherche 70 (Neuroscience), Batiment CERVI, Hopital de la Pitie-Salpetriere, Paris, 75013, Fr.
SO Proceedings of the National Academy of Sciences of the United States of America (2003), 100(23), 13525-13530 CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
AB Serotonin (5-HT) controls a wide range of biol. functions. In the brain, its implication as a neurotransmitter and in the control of behavioral traits has been largely documented. At the periphery, its modulatory role in physiol. processes, such as the

cardiovascular function, is still poorly understood. The rate-limiting enzyme of 5-HT synthesis, tryptophan hydroxylase (TPH), is encoded by two genes, the well characterized tph1 gene and a recently identified ***tph2*** gene. In this article, based on the study of a mutant mouse in which the tph1 gene has been inactivated by replacement with the .beta.-galactosidase gene, the authors establish that the neuronal ***tph2*** is expressed in neurons of the raphe nuclei and of the myenteric plexus, whereas the nonneuronal tph1, as detected by .beta.-galactosidase expression, is in the pineal gland and the enterochromaffin cells. Anat. examn. of the mutant mice revealed larger heart sizes than in wild-type mice. Histol. investigation indicates that the primary structure of the heart muscle is not affected. Hemodynamic analyses demonstrate abnormal cardiac activity, which ultimately leads to heart failure of the mutant animals. This report links loss of tph1 gene expression, and thus of peripheral 5-HT, to a cardiac dysfunction phenotype. The tph1-/- mutant may be valuable for investigating cardiovascular dysfunction obsd. in heart failure in humans.
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:808741 CAPLUS
DN 140:53582
TI A unique central ***tryptophan*** ***hydroxylase*** ***isoform***
AU Walther, Diego J.; Bader, Michael
CS Max Delbruck Center for Molecular Medicine (MDC), Berlin, D-13092, Germany
SO Biochemical Pharmacology (2003), 66(9), 1673-1680
CODEN: BCPCA6; ISSN: 0006-2952
PB Elsevier Science B.V.
DT Journal; General Review
LA English
AB A review. Serotonin (5-hydroxytryptophan, 5-HT) is a neurotransmitter synthesized in the raphe nuclei of the brain stem and involved in the central control of food intake, sleep, and mood. Accordingly, dysfunction of the serotonin system has been implicated in the pathogenesis of psychiatric diseases. At the same time, serotonin is a peripheral hormone produced mainly by enterochromaffin cells in the intestine and stored in platelets, where it is involved in vasoconstriction, hemostasis, and the control of immune responses. Moreover, serotonin is a precursor for melatonin and is therefore synthesized in high amts. in the pineal gland. Tryptophan hydroxylase (TPH) catalyzes the rate limiting step in 5-HT synthesis. Until recently, only one gene encoding TPH was described for vertebrates. By gene targeting, we functionally ablated this gene in mice. To our surprise, the resulting animals, although being deficient for serotonin in the periphery and in the pineal gland, exhibited close to normal levels of 5-HT in the brain stem. This led us to the detection of a second TPH gene in the genome of humans, mice, and rats, called ***TPH2*** . This gene is predominantly expressed in the brain stem, while the classical TPH gene, now called TPH1, is expressed in the gut, pineal gland, spleen, and thymus. These findings clarify puzzling data, which have been collected over the last decades about partially purified TPH proteins with different characteristics and justify a new concept of the serotonin system. In fact, there are two serotonin systems in vertebrates, independently regulated and with distinct functions.
RE.CNT 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:692174 CAPLUS
DN 139:289470
TI Comparison of circadian expression of ***tryptophan*** ***hydroxylase*** ***isoform*** mRNAs in the rat pineal gland using real-time PCR
AU Sugden, David
CS Centre for Reproduction, Endocrinology and Diabetes, School of Biomedical Sciences, Kings College London, London, UK
SO Journal of Neurochemistry (2003), 86(5), 1308-1311
CODEN: JONRA9; ISSN: 0022-3042
PB Blackwell Publishing Ltd.
DT Journal
LA English
AB A second gene encoding a functional tryptophan hydroxylase activity has recently been described (***TPH2***), which is expressed abundantly in brainstem, the primary site of serotonergic neurons in the CNS. As serotonin (5-HT) has an important role as a precursor of the nocturnal synthesis of the pineal gland hormone, melatonin, it was of interest to det. the relative expression of TPH1 and 2 mRNA in the rat pineal during the light:dark (L:D) cycle using sensitive real-time RT-PCR assays which were developed for each TPH isoform. TPH1 mRNA expression was 105-fold more abundant in rat pineal than ***TPH2*** , and showed a significant .apprx.4-fold nocturnal increase in expression which may contribute to the previously described nocturnal increase in pineal tryptophan hydroxylase activity. ***TPH2*** expression within the gland showed no significant variation with time of day and was very low (.apprx.300 copies/gland) indicating expression in the small proportion of "non-pinealocyte" cells in the gland.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:384284 CAPLUS
DN 138:401160
TI Elisabeth-Gateff prize of GFG 2001: Serotonin biosynthesis in the central nervous system will be rate-definably catalyzed by a neuron-specific Trp-hydroxylase-isozyme
AU Walther, Diego J.
CS Dept. of Genetics, Bioinformatics and Structural Biology, Max Delbruck Center for Molecular Medicine, Berlin, Germany
SO BIOspektrum (2003), 9(2), 184-186 CODEN: BOSPFD; ISSN: 0947-0867
PB Spektrum Akademischer Verlag
DT Journal
LA German
AB The work of the winners of the Elisabeth-Gateff-Price 2001 Diego J. Walther et al. is presented which is concerned with the discovery of a ***tryptophan*** ***hydroxylase*** ***isoform*** in the brain catalyzing serotonin biosynthesis in the central nervous system.
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 23 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:341202 CAPLUS
DN 140:89687
TI Knockout mouse points to second form of tryptophan hydroxylase
AU Veenstra-VanderWeele, Jeremy; Cook, Edwin H., Jr.
CS Department of Psychiatry, The University of Chicago, Chicago, IL, 60637, USA

SO Molecular Interventions (2003), 3(2), 72-75 CODEN: MIONAR; ISSN: 1534-0384
PB American Society for Pharmacology and Experimental Therapeutics
DT Journal; General Review
LA English
AB A review describes the identification of two tryptophan hydroxylase (TPH) mRNA species arising from different promoters and having different translational efficiency. The expression of more efficiently translated isoform is increased in response to stress. The study by Walther et al. (2003) demonstrated that a Tph1 knockout mouse failed to generate the expected phenotype, in which Tph1-deficient mice continued to produce 5-hydroxytryptamine in the brain, but had almost no detectable serotonin in the duodenum, and none in the whole blood. The study found that the antibodies commonly used to identify TPH cross-reacted to both Tph1 and ***Tph2*** gene products.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 24 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:90198 CAPLUS
DN 138:331851
TI Synthesis of serotonin by a second ***tryptophan*** ***hydroxylase*** ***isoform***
AU Walther, Diego J.; Peter, Jens-Uwe; Bashammakh, Saleh; Hortnagl, Heide; Voits, Mechthild; Fink, Heidrun; Bader, Michael
CS Max Delbruck Center Molecular Med. (MDC), Berlin, D-13092, Germany
SO Science (Washington, DC, United States) (2003), 299(5603), 76 CODEN: SCIEAS; ISSN: 0036-8075
PB American Association for the Advancement of Science
DT Journal
LA English
AB Serotonin (5-HT) is synthesized in two steps, with tryptophan hydroxylase (TPH) as the rate-limiting enzyme. To study the physiol. impact of the loss of 5-HT synthesis, the authors generated mice genetically deficient for TPH (Tph-1-). Tph-/- mice expressed normal amts. of 5-HT in classical serotonergic brain regions. However, Tph-/- mice lacked 5-HT in the periphery except for in the duodenum. Tph-/- mice exhibited no significant behavioral differences in elevated plus maze and hole board tests, which are indicative for 5-HT related behavior. Despite suggestions of a possible second TPH isoform mol. verification has been lacking. The authors therefore cloned and sequenced the TPH isoform (referred as ***Tph2***) (GenBank: AY090565) which was different from the known TPH (referred to as Tph1), Pah and Th of the mouse. Tph1 mRNA was detected in the duodenum, but not in the brain. In contract ***Tph2*** was detected exclusively in the brain. In addn. the authors also cloned and sequenced the rat and human ***TPH2*** homologs (GenBank: AY098915 and AY098914). The discovered duality of the serotonin system in vertebrates may open up new avenues for specific therapeutic approaches exclusively affecting central or peripheral 5-HT actions.

L3 ANSWER 25 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:754632 CAPLUS
DN 132:152131
TI Silylcupration of (R)-2,2-Dimethyl-3-(tert-butoxycarbonyl)-4-ethynyloxazolidine: A Stereoselective Approach to the Synthesis of .gamma.-Silylated Saturated and Unsaturated .alpha.-Amino Acids
AU Reginato, Gianna; Mordini, Alessandro; Valacchi, Michela; Grandini, Elena
CS Dipartimento di Chimica Organica U. Schiff, Centro CNR Composti Eterociclici, Florence, I-50121, Italy
SO Journal of Organic Chemistry (1999), 64(25), 9211-9216 CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:152131
AB Enantioselective synthesis of .gamma.-silylated amino acids is reported, using a four-step procedure based on the silylcupration of ethynyloxazolidine (I). Silylcuprates are highlighted as useful reagents to be employed with enantiomerically enriched substrates. Vinylsilanes [II; SiR3 = SiMe3, SiPhMe2, or SiBu- ***tPh2***] are easily prepd. and highlighted as useful intermediates to yield the final compds. after redn., opening of the oxazolidine ring, and oxidn. Moreover, .beta.,.gamma.-unsatd. amino acids are obtained as very interesting vinylglycine derivs. The capability of silicon-contg. amino acids to be incorporated into dipeptides is also shown.
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 26 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:298741 CAPLUS
DN 131:38746
TI Inter- and Intramolecular Hydrogen-Bonding Interaction of Hydroxo Groups and Steric Effect of Alkyl Substituents on Pyrazolyl Rings in TpR Ligands: Synthesis and Structural Characterization of Chloro-, Acetylacetonato-, and Hydroxo Complexes of VO2+ with TpPri2 and TpMe2 Ligands
AU Kosugi, Masahiro; Hikichi, Shiro; Akita, Munetaka; Moro-oka, Yoshihiko
CS Research Laboratory of Resources Utilization, Tokyo Institute of Technology, Yokohama, 226-8503, Japan
SO Inorganic Chemistry (1999), 38(11), 2567-2578 CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
AB Novel vanadyl (VO2+) chloro and hydroxo complexes with the hindered TpPri2 (hydrotris(3,5-diisopropyl-1-pyrazolyl)borate) and TpMe2 (hydrotris(3,5-dimethylpyrazolyl-1-pyrazolyl)borate) ligands were prepd. and structurally characterized successfully. Ligand displacement of VOCl2(MeCN)2(H2O) by TpR afforded octahedral chloro complexes, TpRV(O)(Cl)(X) (1: R = Pri2, X = PzPri2H; 2: R = Pri2, X = py; 6: R = Me2, X = NCMe). Hydrolysis of the obtained chloro complexes yielded the corresponding hydroxo complexes 4, 5, and 7, but their structures were very unique and different from that of the previously reported dinuclear VO2+ bis(.mu.-hydroxo) complex with the less hindered ***TpH2*** (hydrotris(1-pyrazolyl)borate) ligand. For the TpPri2 complexes, the octahedral hydroxo-aqua complex, TpPri2V(O)(OH)(OH2) (4), and the trinuclear bis(.mu.-hydroxo)bis(.mu.-pyrazolato) complex, TpPri2V(O)(.mu.-OH)(.mu.-PzPri2)V(O)(.mu.-OH)(.mu.-PzPri2)V(O)TpPri2 (5), were isolated. The hydroxo-aqua complex 4 was dimerized through the intermol. hydrogen-bonding interaction between the hydroxo and aqua ligands forming the H3O2- bridging ligand. The trinuclear complex 5 consisted of two octahedral TpPri2V(O) fragments and a distorted trigonal-bipyramidal non-TpPri2-supported VO2+ center, sitting on the pseudo C2 symmetry axis, and was formed via coupling of 4 and the VO2+-pyrazolato species, resulting from partial decompn. of the chloro complexes during the hydrolysis. Steric repulsion of the bulky Pri groups in TpPri2 might hinder the formation of a dinuclear bis(.mu.-

hydroxo) complex like the ***TpH2*** and TpMe2 derivs. The dinuclear bis(.mu.-hydroxo) complex with the TpMe2 ligand, (.kappa.3-TpMe2)V(O)(.mu.- OH)2V(O)(.kappa.2-TpMe2) (7), consisted of syn-arranged V:O fragments, having the different coordination geometries of the vanadium centers (octahedron with .kappa.3-TpMe2 and trigonal bipyramid with .kappa.2-TpMe2). Intramol. hydrogen-bonding interaction between one of the two hydroxo groups and the noncoordinated pyrazolyl nitrogen atom in .kappa.2-TpMe2 was obsd.
RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 27 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:308889 CAPLUS
DN 124:338147
TI Genetic variability of tocopherol composition in sunflower seeds as a basis of breeding for improved oil quality
AU Demurin, Y.; Skoric, D.; Karlovic, D.
CS Pustovoit's Institute Oil Crops (VNIIMK), Krasnodar, 38, Russia
SO Plant Breeding (1996), 115(1), 33-36 CODEN: PLABED; ISSN: 0179-9541
PB Blackwell
DT Journal
LA English
AB The variability of seed tocopherol content in wild sunflower species, the expressivity of tph1 and ***tph2*** mutations in different lines and the oxidative stability of sunflower oil with altered tocopherol and fatty acid compn. were objectives of this research. Near-isogenic lines for three genes, i.e. Tph1, ***Tph2*** , and Ol, were developed and investigated. Tocopherol content was detd. with TLC and HPLC, as well as fatty acid compn. with GC of Me esters. Rancimat tests were used to est. the oxidative stability of the oil. The seed tocopherol compn. of wild sunflower species was shown to be uniform with a prevailing content of the .alpha.-homolog (90-99%). The genetic background of different near-isogenic lines was found to influence expressivity of mutations for tocopherol compn. High content of strong antioxidants, such as .beta.-, .gamma.-, and .delta.-tocopherols increased oil oxidative stability of linoleic and oleic types of oil by 1.2-3.0 times. The breeding model of sunflower hybrids should include antioxidant and vitamin parameters balanced for oils of different applications.

L3 ANSWER 28 OF 28 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1986:572614 CAPLUS
DN 105:172614
TI Tin-119 Moessbauer spectroscopic studies of the products of the reaction of triorganotin(IV) derivatives with 6-thiopurine
AU Barbieri, R.; Di Bianca, F.; Rivarola, E.; Huber, F.
CS Ist. Chim. Gen., Univ. Palermo, Palermo, I-90123, Italy
SO Inorganica Chimica Acta (1985), 108(3), 141-5 CODEN: ICHAA3; ISSN: 0020-1693
DT Journal
LA English
OS CASREACT 105:172614
AB A structural study of the products of the reaction of R3Sn(IV) derivs. (R = Me, Bu, Ph) with 6-thiopurine, 6-***TPH2*** , and its sodium salt, 6-TPHNa, has been undertaken using Moessbauer spectroscopy and the point-charge model rationalization of the Moessbauer parameter nuclear quadrupole splitting. The synthetic reactions have been carried out at .apprx.0, 20, and 50.degree.. The Moessbauer spectra of the complexes R3Sn(6-TPH) are consistent with the occurrence of two distinct tin(IV) sites in samples prepd. at the lower temp., while one only site appears by increasing the temp. of the reaction. Two tin sites constantly occur in the products of the reactions involving the Ph3Sn(IV) moiety; the stoichiometry is assumed to be (Ph3Sn)3(6-TPH)(6-TP) for the uniquely formed complex. Solid state polymeric structures with trigonal bipyramidal environments of the tin atoms and planar SnC3 skeletons have been proposed. The apical ligand atoms have been assumed to be N, S and N, N in the samples showing two individual tin(IV) sites, and N, N when a single site was present.

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L1 15 S (TRYPTOPHAN(W)HYDROXYLASE(W)ISOFORM)/BI,AB
L2 23 S TPH2/BI,AB
L3 28 S L1 OR L2

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